

TITLE 800G SR8 50m Near Packaged Optics (NPO)	DOC No. RFD-20260713100-001	
	REVISION : 01	AUTHORIZED BY : Eric Chen
	DATE : 2026.07.10	CLASSIFICATION : Near Packaged optics

1. Features

- Hot-Pluggable 800G Near Packaged Optics (NPO) Form Factor
- Up to 106 Gbps data rate per channel by PAM4 modulation
- Support 800GAUI-8 electrical interface
- Integrated 850 nm VCSEL Array and PD Array w/o DSP or CDR
- 2* MPO-12 APC Connector
- Compliant with CMIS 5.0
- Maximum Power Consumption 7W
- 3.3V Power Supply & 5V VCSEL Driver Supply Voltage
- Case operating temperature 0°C to 70°C
- RoHS complaint

2.PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

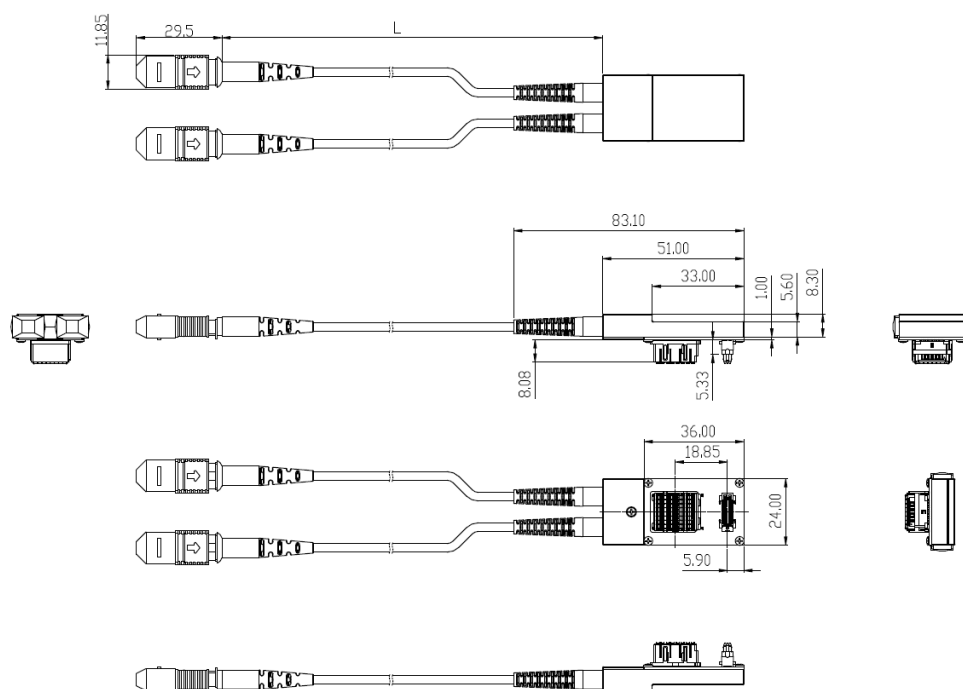
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JPC PN	Wavelength (nm)	Distance (m)	Fiber Type	Sen. (dBm)	Connector	Tem.
PAB**OKTCAX5-1	850	50	MMF	- 30	Dual 12MPO	C

Note-1: ** Indicates the customer code.

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2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKING



3. Product Specification

3.1 Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Notes
Storage Temperature	T_s	-40	85	°C	
VCC Supply Voltage	$V_{CC\ 3.3}$	-0.5	3.6	V	
VCSEL Driver Supply Voltage	$V_{CC\ 5}$	-0.5	5.5	V	
Relative Humidity (non-condensing)	RH	5	95	%	

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3.2 Recommended Operating Conditions

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Operating Case Temperature	T _{OPR}	0		70	°C	
Power Supply Voltage	V _{CC 3.3}	3.135	3.3	3.465	V	
VCSEL Driver Supply Voltage	V _{CC 5}	4.5	5	5.25	V	
Maximum Power Consumption (each end)	P _{max}			7	W	
Signaling Rate per Lane	SRL	-	53.125	-	GBd	PAM4

3.3 Transmitter Optical Specifications

Parameter	Symbol	Min.	Typical	Max	Unit	Notes
Wavelength	λ_C	844	853	863	nm	
RMS spectral width	$\Delta\lambda_{rms}$		0.35	0.55	nm	
Average Launch Power, each lane	AOP _L	-1.0		3.0	dBm	
Average Launch Power of OFF Transmitter, each lane	T _{OFF}			-30	dBm	
Extinction Ratio, each lane	ER		3		dB	
Optical Return Loss Tolerance	ORL			14	dB	
Transmitter Reflectance	T _R			-26	dB	

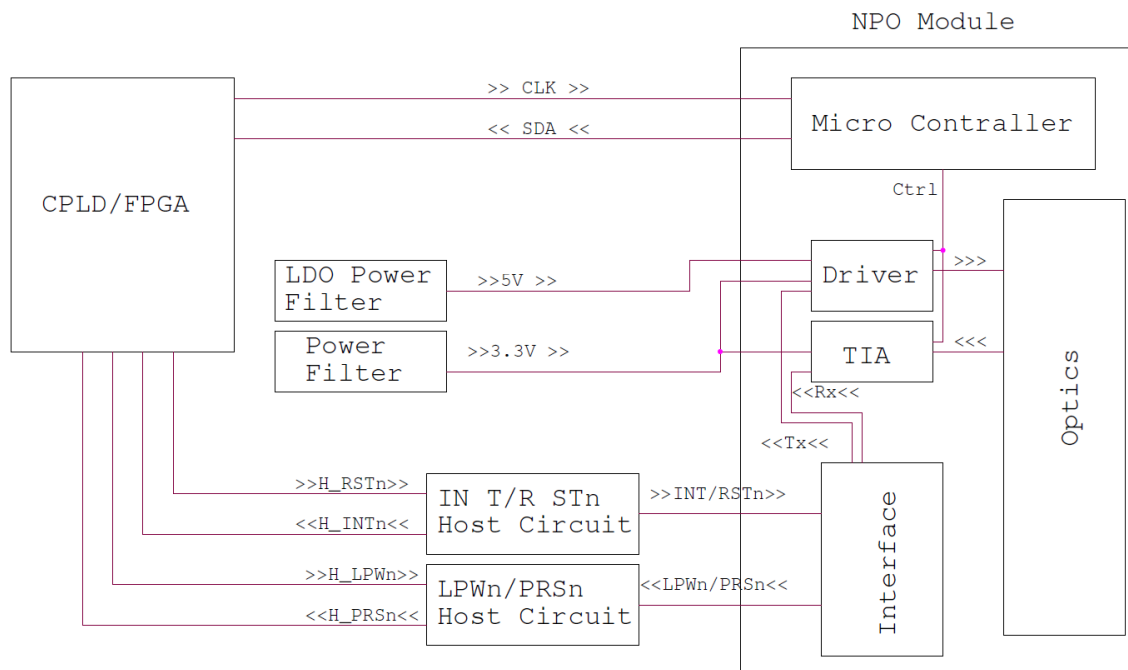
3.4 Receiver Optical Specifications

Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Wavelength	λ_C	840	850	868	nm	
Damage Threshold, average optical	AOP _D	5	-	-	dBm	

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power, each lane						
Average Receive Power, each lane	AOP _R	-6.3	-	4.0	dBm	
Receive Power (OMA _{outer}), each lane	OMA _R	-	-	3.5	dBm	
Receiver Reflectance	RR	-	-	-20	dB	

4.Recommended NPO Host Board Schematic



Recommended NPO Host Board Schematic

5. Digital Diagnostics

Parameter	Range	Accuracy	Unit	Calibration
Temperature	0 to 70	±3	°C	Internal
Voltage	3.135 to 3.465	±3%	V	Internal

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6.Modification History

Rev.	Comments	Date	Originator	Approval
01	Preliminary Draft	2026.07.10	Eric Chen	Mike Sun